

average surface roughness of Hata et al. in order to optimize the ability of electrodes to adhere to the oxide layer as well as the power density because of the teachings of Badding et al., thus arriving at the instant invention which claims a surface roughness of an oxide layer that has Ra, Rz and Rmax within certain ranges on both sides of the layer.

However, one of the important characteristics of the presently claimed electrolyte sheet is that it has "a ratio of Rmax to Rz (Rmax/Rz ratio) of at least one surface ... in a range of 1.0 to 2.0", meaning that the difference between Rmax and Rz is small, and the shapes of projections are relatively small and have almost the same height when the electrolyte sheet is viewed from the direction of cross section (please see page 22, line 12 to page 23, line 1 of the present specification).

On the other hand, the only standards of surface roughness in both references are Ra and Rmax (Ry), and such an Rmax/Rz ratio as employed in the present invention is not described or suggested in the references.

Therefore, one of ordinary skill in the art would not expect that the sheets of the references have relatively small projections which have almost the same height, as required in the present invention.

When the Rmax/Rz ratio is in a range of 1.0 to 2.0 as in the present invention, it becomes easy to obtain an electrode film uniform both in film thickness and in quality (please see page 22, line 12 to page 23, line 1 of the specification). When all of "Rz", "Ra", "Rz ratio" or "Ra ratio", and "Rmax/Rz ratio" are in the range of the present invention, the electrolyte sheet has improved adhesion property to electrodes as well as superior electric power generation characteristics, as demonstrated by the Examples described in the specification (please also see Table 3).

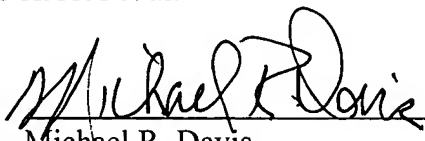
The Examiner takes the position that it would have been obvious to have optimized the peak height and average surface roughness of Hata et al. But even if this were true, the references still do not raise a presumption of obviousness because of their failure to disclose the presently claimed requirement that the ratio of Rmax to Rz of at least one surface of the sheet is in a range of 1.0 to 2.0.

The Hata et al. reference is cited and discussed in the paragraph bridging pages 2 and 3 of the present application. As noted in the next paragraph, beginning at page 3, line 6 of the present application, this prior art method completely fails to take into consideration the relationship between the surface roughness of electrolyte sheets and the electric power generation characteristics, and the publication contains no description of an electrolyte sheet having both acceptable adhesion to electrode printed layers and acceptable electric power generation characteristics. Applicants have found that, in addition to improved adhesion to electrodes, the electrolyte sheet of the present invention, having all of the surface roughness characteristics as presently claimed, also exhibits superior electric power generation characteristics, again as shown by the results in Table 3 in the application. There is no suggestion in either of the references which would lead one of ordinary skill in the art to expect that these superior electric power generation characteristics could be achieved by adopting the surface roughness characteristics as presently claimed.

In view of these remarks, Applicants respectfully submit that the presently claimed invention is clearly patentable over the applied references. Accordingly, it is submitted that the rejection set forth by the Examiner has been overcome, and that application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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